line of sight, then a person should be able see all the display devices along the line of sight. Multiple lines of sight may also be present in many instances. As illustrated in FIG. **1**B, one suitable arrangement includes screens for two display devices **18***a* and **18***d* that are intersectable by a common line of sight **20**.

[0057] Rear display device **18***d* includes a digital display device with a curved surface that shows video data. A digital display device refers to a display device that is configured to receive and respond to a digital communication, e.g., from a processor or video card. Thus, OLED, LCD and projection type (LCD or DMD) devices are all examples of suitable digital display devices. E Ink Corporation of Cambridge Mass. produces electronic ink displays that are suitable for use in rear display device **18***d*. Microscale container display devices, such as those produced SiPix of Fremont Calif., are also suitable for use in rear display device **18***d*. Several other suitable digital display devices are provided below.

[0058] One suitable curved digital display device includes a projector that casts an image onto a curved surface. Suitable projectors include LCD-type and DMD-type projectors, as available from a wide variety of vendors known to those of skill in the art. In this case, the curved surface includes a white screen or translucent material, such as plastic, curved to desired dimensions. In a specific embodiment, the curvature substantially resembles the curvature of traditional mechanical reels used in a slot machine. Another suitable curved digital display device includes a flexible organic light emitting diode (OLED). Many flexible OLEDs are conformable and may be bent over a shape to take the shape of an mechanical support such as an underlying structure or frame. Some flexible OLEDs are thin and resemble paper; these flexible OLEDs are usually flexible but not foldable. A third form of flexible OLED is rollable and has a shape memory. Any of the theses flexible OLEDs types are suitable for use herein. Typically, the flexible OLED is bent over and attached to a curved sub-structure or stationary framework that provides structural support and maintains a desired curvature. Other digital display devices with curved surfaces are suitable for use and include a front projection display, or a rear projection display, LCD glass, transparent OLED, and fOLED.

[0059] In a specific embodiment, a flexible OLED changes shape over time. For example, one or more actuators may move points of the flexible OLED to mechanically deform the display and achieve a desired shape. This may be done to change a curved and flexible OLED to a convex shape, serpentine shapes, a curvature similar to a reel, a flat curvature, etc. These shape changes may occur in real time.

[0060] In one embodiment, all the layered displays are configured (spatially and using video provided to each display device) to resemble a traditional mechanical slot machine. In this case, curvature of the curved surface for interior display device **18***d* substantially resembles the curvature of a traditional mechanical reel. While traditional mechanical reels come in a variety of diameters and widths that the curved surface of display device **18***d* may mimic in diameter, width, and/or curvature, traditional mechanical reels were typically circular and the curvature was relatively constant. To resemble a traditional mechanical slot machine then, the curved surface of interior display device **18***d* may then include a circular surface of a suitable diameter.

[0061] In a specific embodiment, the interior display device **18***d* includes a flexible OLED that is bent to resemble mechanical slot reels. The curved surface is then produced by the final shape of the bent and flexible OLED, which may be fixed to a cylinder or support of a desired diameter to preserve the curved shape. The curved OLED then outputs 'virtual slot reels', or video information resembling slot reels.

[0062] The curved digital display device permits remote and digital reconfiguration of video output by display device **18***d*. For example, display device **18***d* and its curved surface is well suited to display video reel games that mimic mechanical reels that were used in older slot machines (and are still popular in the gaming industry). The digital nature of display device **18***d*, however, permits the reel game to be changed as games are downloaded to the gaming machine. For example, the symbols on the reels may be changed to present a new reel game. Thus, new symbols or a different number of symbols may be used in the new game. Alternatively, the number of reels may be changed. Display device **18***d* may output color video or black and white video, depending on the game or display device technology used.

[0063] Referring to either arrangement of FIG. **1**A or **1**B, the portions of proximate display devices **18***a* and **18***b* along line of sight **20** are significantly transparent or translucent. Pixilated element panels on many non-emissive displays such as LCD panels are largely invisible to a viewer. More specifically, many display technologies, such as electroluminescent displays and LCD panels, include portions that are transparent when no video images are displayed thereon. For example, an electroluminescent display may utilize non-organic phosphors that are both transparent and emissive (such as a tOLED), and addressed through transparent row and column drivers. Pixilated element panels on LCD panels are also available in significantly transparent or translucent designs that permit a person to see through the pixilated panels when not locally displaying an image.

[0064] Portions of touchscreen **16** and light valve **18***e* are also translucent or transparent, or alternatively have the capacity to be translucent or transparent in response to control signals from a processor included in the gaming machine. When portions (or all) of the screens for touchscreen **16**, display devices **18***a* and **18***b*, and light valve **18***e* are transparent or translucent, a player can simultaneously see images displayed on the display screen **18***a* and **18***b*—as well as the images displayed on the interior display devices **18***c* or **18***d*—by looking through the transparent portions of proximate display devices.

[0065] Accordingly, the present invention can display co-acting or overlapping images to a person (see FIGS. **2**-**5**). For example, front display devices **18***a* or **18***b* may display pay-lines that illuminate winning combinations reels disposed on display devices **18***c* or **18***d*. In addition, the layered display devices may also provide 3D images that include a combination of virtual 3D graphics on images on each screen and 3D output between the layered display devices.

[0066] In one embodiment, exterior display device **18***a* includes central portions that are transparent to permit viewing of the virtual slot reels that are shown on the curved surface of display device **18***d*, while peripheral portions of the exterior display device **18***a* show a pay table or other game relevant information, such as whether a bonus game or progressive game is available. Intermediate display device **18***e* may include a light valve or light pipe with transparent windows that permit viewing of the virtual slot reels on the curved OLED. Alternatively, the intermediate display device may include a transparent LCD **18***b* that has a) transparent windows to permit viewing of the virtual slot wheels and b) other